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- An isolated polypeptide comprising an amino acid sequence which has at least 85% identity to the amino acid sequence selected from the group consisting of: SEQ ID NO:2, SEQ ID NO:4 over the entire length of SEQ ID NO:2 or SEQ ID NO:4 respectively.
- An isolated polypeptide as claimed in claim 1 in which the amino acid 2. sequence has at least 95% identity to the amino acid sequence selected from the group consisting of: SEQ ID NO:2, SEQ ID NO:4 over the entire length of SEQ ID NO:2 or SEQ ID NO:4 respectively.
- 3. The polypeptide as claimed in claim 1 comprising the amino acid sequence selected from the group consisting of: SEQ ID NO:2, SEQ ID NO:4.
- 4. An isolated polypepfide of SEQ ID NO:2, SEQ ID NO:4.
- A polypeptide comprising an immunogenic fragment of the polypeptide 5. as claimed in any one/of claims 1 to 4 in which the immunogenic fragment is capable of raising an immune response which recognises the polypeptide of SEQ ID NO:2, SEQ ID NO:4.
- б. A polypepfide according to claim 5 wherein the immunogenic fragment is coupled to a carrier.
- 7. An isolated polynucleotide comprising a nucleotide sequence encoding a polypeptide that has at least 85% identity to the amino acid sequence of SEQ ID NO:2, 4 over the entire length of SEQ ID NO:2, 4 respectively; or a nucleotide sequence complementary to said isolated polynucleotide.





- 8. An isolated polynucleotide comprising a nucleotide sequence that has at least 85% identity to a nucleotide sequenc encoding a polypeptide of SEQ ID NO:2, 4 over the entire coding region; or a nucleotide sequence complementary to said isolated polynucleotide.
- 9. An isolated polynucleotide which comprises a nucleotide sequence which has at least 85% identity to that of SEQ ID NO:1, 3 over the entire length of SEQ ID NO:1, 3 respectively; or a nucleotide sequence complementary to said isolated polynucleotide.
- 10. The isolated polynucleotide as claimed in any one of claims 7 to 9 in which the identity is at least 95% to SEQ ID NO:1, 3.
- An isolated polynucleotide comprising a nucleotide sequence encoding 11. the polypeptide of SEQ ID NO:2, SEQ ID NO:4.
- 12. An isolated polynucleotide comprising the polynucleotide of SEQ ID NO:1, SEQ ID NO:3.
- An isolated polynucleotide comprising a nucleotide sequence encoding 13. the polypeptide of SEQ ID NO:2, SEQ ID NO:4 obtainable by screening an appropriate library under stringent hybridization conditions with a labeled probe having the sequence of SEQ ID NO:1, SEQ ID NO:3 or a fragment thereof.
- 14. An expression vector or an isolated live microorganism comprising a recombinant polynucleotide according to any one of claims 7 to 13.
- 15. A host cell comprising the expression vector of claim 14 or a subcellular fraction or a membrane of said host cell expressing an isolated polypeptide comprising an amino acid sequence that has at least 85% identity to the amino

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acid sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:4.

- 16. A process for producing a polypeptide comprising an amino acid sequence that has at least 85% identity to the amino acid sequence selected from the group consisting of: SEQ ID NO:2, SEQ ID NO:4 comprising culturing a host cell of claim 15 under conditions sufficient for the production of said polypeptide and recovering the polypeptide from the culture medium.
- 17. A process for expressing a polynucleotide of any one of claims 7 to 14 comprising transforming a host cell with the expression vector comprising at least one of said polynucleotides and culturing said host cell under conditions sufficient for expression of any one of said polynucleotides.
- 18. A vaccine composition comprising an effective amount of the polypeptide of any one of claims 1 to 6 and a pharmaceutically acceptable carrier.
- 19. A vaccine composition comprising an effective amount of the polynucleotide of any one of claims 7 to 13 and a pharmaceutically effective carrier.
- 20. The vaccine composition according to either one of claims 18 or 19 wherein said composition comprises at least one other *Neisseria meningitidis* antigen.
- 21. An antibody immunospecific for the polypeptide or immunological fragment as claimed in any one of claims 1 to 6.
- 22. A method of diagnosing a Neisseria meningitidis infection, comprising identifying a polypeptide as claimed in any one of claims 1 to 6, or an antibody

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that is immunospecific for said polypeptide, present within a biological sample from an animal suspected of having such an infection.

- 23. Use of a composition comprising an immunologically effective amount of a polypeptide as claimed in any one of claims 1 to 6 in the preparation of a medicament for use in generating an immune response in an animal.
- 24. Use of a composition comprising an immunologically effective amount of a polynucleotide as claimed in any one of claims 7 to 13 in the preparation of a medicament for use in generating an immune response in an animal.
- 25. A therapeutic composition useful in treating humans with *Neisseria* meningitidis disease comprising at least one antibody directed against the polypeptide of claims 1 to 6 and a suitable pharmaceutical carrier.

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